Amendments to the Specification:

Please replace paragraph **[0001]** with the following rewritten paragraph:

[0001] The invention relates to a fuel cell generating electric power from oxygen and hydrogen ~~hydronium~~ ions, and comprising an anode, a magnetic cathode comprising an active layer, a proton electrolyte between the anode and the cathode, and a network of permanent magnets having magnetic axes perpendicular to the interface between the electrolyte and the active layer, the magnets comprising a first pole and a second pole.

Please replace paragraph **[0015]** with the following rewritten paragraph:

[0015] Figure 1 represents a fuel cell comprising an anode A, a proton electrolyte 1 and a magnetic cathode comprising an active layer 2, a porous electric current collector plate 5 and a diffusion layer 6. The oxygen arriving from the right passes through the collector plate 5 and the diffusion layer 6 of the cathode and enters the active layer. The hydrogen comes in the form of hydrogen ions (H^+), ~~hydronium ions (usually called H^+),~~ borne by a compound able to be a hydrogen vector (alcohol, sugar, nitrogenated compound, etc...).

Please replace paragraph **[0023]** with the following rewritten paragraph:

[0023] As represented in figure 4, the cell can comprise a support network 11 comprising apertures 12 wherein the magnets 4 can be arranged. The support comprises passages 13 for the ions, in particular the hydrogen ~~hydronium~~ ions coming from the electrolyte, between the magnets. The passages 13 are therefore triple point zones where the hydrogen ~~hydronium~~ ion H^+, oxygen O_2 and electron elements are in presence, which gives rise to the electrochemical reaction. The material of the support network 11 can be a

non-magnetic material. The support network can be fixed onto the electrolyte 1 or arranged at the interface between the electrolyte 1 and the active layer 2.

Please replace paragraph **[0024]** with the following rewritten paragraph:

[0024] The performance of this improved oxygen diffusion system by a network 3 of magnets 4 depends on the variation of several parameters: the magnetization, the geometry and number of magnets 4, the thickness of the cathode and the geometric distribution of the magnets 4 and of the passages 13 for the hydrogen ~~hydronium~~ ions. In this way, with a flat periodic distribution of the centers of the masses of the magnets 4, as in figure 3, a uniform improvement of the gas diffusion in the catalyzer is obtained. Other flat geometries, for example triangular or fractal, can also be envisaged.